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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/736,251	12/15/2000	Makoto Taniguchi	PM 275410 57850-US-MRB-MK	8736

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EXAMINER

CUEVAS, PEDRO J

ART UNIT	PAPER NUMBER
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2834

DATE MAILED: 03/22/2002

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/736,251

Applicant(s)

TANIGUCHI, MAKOTO

Examiner

Pedro J. Cuevas

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 04 January 2002.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-22 is/are pending in the application.
- 4a) Of the above claim(s) 14-22 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-13 is/are rejected.
- 7) ☒ Claim(s) 2,4 and 5 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 15 December 2000 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 2.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

DETAILED ACTION

Election/Restrictions

1. Applicant's election with traverse of Group I, claims 1-13 in Paper No. 6 filed January 4, 2002 is acknowledged. The traversal is not supported on any ground(s). This is not found persuasive because there were no traversal arguments.

The requirement is still deemed proper and is therefore made FINAL.

2. Applicant is reminded that upon the cancellation of claims to a non-elected invention, the inventorship must be amended in compliance with 37 CFR 1.48(b) if one or more of the currently named inventors is no longer an inventor of at least one claim remaining in the application. Any amendment of inventorship must be accompanied by a request under 37 CFR 1.48(b) and by the fee required under 37 CFR 1.17(i).

Specification

3. The lengthy specification has not been checked to the extent necessary to determine the presence of all possible minor errors. Applicant's cooperation is requested in correcting any errors of which applicant may become aware in the specification.

4. The title of the invention is not descriptive. A new title is required that is clearly indicative of the invention to which the claims are directed.

The following title is suggested: Electromagnetic Wave Noise Entry Inhibiting Connector For Vehicular AC Generator Control Device.

Claim Rejections - 35 USC § 103

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

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(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. Claims 1 and 3 are rejected under 35 U.S.C. 103(a) as being unpatentable over U.S.

Patent No. 4,471,288 to Morishita et al. in view of U.S. Patent No. 5,910,030 to Hollander et al.

Morishita et al. disclose the construction of a control device for a vehicular AC generator, comprising:

a field current switching circuit unit (3) having a switching transistor for performing switching control of current conducted to a field coil (102);

a switching transistor control circuit unit (8) for performing intermittent control of the switching transistor based on a battery voltage and a predetermined target voltage;

an internal electric source circuit unit (7) that uses electricity supplied from a battery to form an internal electric source voltage, the internal electric source voltage supplied to the switching transistor control circuit unit; and

a battery voltage supplying terminal that supplies electricity to the internal electric source circuit unit from the battery via an internal electric source line.

However, it fails to disclose a casing containing at least one IC or the switching transistor control circuit unit which is mold-sealed by resin, and a magnetic body mounted to the internal electric source line or the battery voltage-supplying terminal; and wherein the battery voltage supplying terminal and the magnetic body are fixed to the casing.

Hollander et al. teach the construction of a casing (12) which can contain at least one IC or a switching transistor control circuit unit which is mold-sealed by resin, and a magnetic body (42) mounted to an electric source line or terminal wherein the terminal and the magnetic

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body are fixed to the casing for the purpose of providing an electrical connector having a ferrite element mounted in proximity of the terminals.

It would have been obvious to one skilled in the art at the time the invention was made to use the casing and magnetic body disclosed by Hollander et al. on the control device for a vehicular AC generator disclosed by Morishita et al. for the purpose of providing an electrical connector having a ferrite element mounted in proximity of the terminals.

7. With regards to claim 3, Morishita et al. in view of Hollander et al. disclose:

an IG ON detection terminal connected to an IG ON detection line, the IG detection terminal being connected to one end of an on-board ignition switch (5) directly or through a lamp (6), said IG ON detection terminal detecting when an ignition switch is ON; and

a magnetic body that can be mounted to the IG ON detection line or the IG ON detection terminal, wherein the IG ON detection terminal and the magnetic body are fixed to the casing.

8. Claims 6-13 are rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent No. 4,471,288 to Morishita et al. in view of U.S. Patent No. 5,910,030 to Hollander et al. as applied to claims 1 and 3 above, and further in view of common knowledge in the art.

Morishita et al. in view of Hollander et al. disclose the construction of a control device for a vehicular AC generator as described above.

However, it fails to disclose the construction of a control device for a vehicular AC generator wherein the magnetic body is disposed closer to the internal electric source circuit unit

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than a connection between the battery voltage supplying terminal and the field coil mounted to the battery voltage supplying terminal or the internal electric source line.

It would have been an obvious matter of design choice to place the magnetic body closer to the internal electric source circuit unit since the applicant has not disclosed that the distance at which the magnetic body is located in the connector structure solves any stated problem or is for any particular purpose and it appears that the invention would perform equally well with the magnetic body located near or far from the source circuit unit.

9. With regards to claim 7, Morishita et al. in view of Hollander et al. disclose the construction of a control device for a vehicular AC generator wherein the magnetic body is embedded in a connector portion of a resin provided integrally on the casing of a resin.

10. With regards to claim 8, Morishita et al. in view of Hollander et al. disclose the construction of a control device for a vehicular AC generator wherein the magnetic body is received in a magnetic body receiving groove, said magnetic body receiving groove formed in a concave manner on a bottom surface of a connector portion of a resin provided integrally on the casing as shown in Figure 1.

11. With regards to claim 9, Morishita et al. in view of Hollander et al. disclose the construction of a control device for a vehicular AC generator wherein a peripheral wall of the connector portion facing the magnetic body receiving groove comprises a rib, said rib narrowing an opening of the magnetic body receiving groove, the peripheral wall and the rib have an elastic deforming characteristics in a direction allowing enlargement of an opening for insertion of the magnetic body into the magnetic body receiving groove as shown in Figure 29.

12. With regards to claim 10, Morishita et al. in view of Hollander et al. disclose the construction of a control device for a vehicular AC generator wherein the magnetic body is formed from an electrically conductive magnetic material electrically insulated by a resin casing or a resin connector portion.

13. With regards to claim 11, Morishita et al. in view of Hollander et al. disclose the construction of a control device for a vehicular AC generator wherein the battery voltage supplying terminal or the IG ON detection terminal is flat-plate shaped, a cross section in a direction perpendicular to a lengthwise direction is substantially rectangular in shape, the magnetic body having a slot as shown in Figure 26.

14. With regards to claim 12, Morishita et al. in view of Hollander et al. disclose the construction of a control device for a vehicular AC generator wherein:

the battery voltage supplying terminal has a ring-shaped tip end having a larger width than a base; and

the magnetic body mounted to the battery voltage supplying terminal has a slot through which the tip end extends as shown in Figure 26.

15. With regards to claim 13, Morishita et al. in view of Hollander et al. disclose the construction of a control device for a vehicular AC generator wherein the magnetic body (2022) has a plurality of through holes, each of the plurality of terminals extending separately through a respective one of said plurality of through holes as shown in Figure 28.

Allowable Subject Matter

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16. Claims 2, 4 and 5 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

17. The following is a statement of reasons for the indication of allowable subject matter.

The prior art does not teach the construction of a control device for a vehicular AC generator:

having an inductance element connected in series to the internal electric source line as described in claim 2;

having an inductance element mounted in series to the IG ON detection line as described in claim 4; and

a high frequency bypass capacitor connected between the battery voltage detection line or terminal and a voltage potential source at a voltage potential equal to a negative potential of the battery as described in claim 5.

Conclusion

18. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. See PTO-892.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Pedro J. Cuevas whose telephone number is (703) 308-4904. The examiner can normally be reached on M-F from 8:30 - 6:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Néstor R. Ramírez can be reached on (703) 308-1371. The fax phone numbers for

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the organization where this application or proceeding is assigned are (703) 305-1341 for regular communications and (703) 305-3432 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0956.

Pedro J. Cuevas
March 18, 2002



NESTOR RAMIREZ
SUPERVISORY PATENT EXAMINER
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